

CLAIMS

1. A segmental retaining wall system, comprising:
 - a wall block including:
 - 5 an interior block face for forming an interior surface of a segmental retaining wall;
 - an exterior block face for forming an exterior surface of a segmental retaining wall;
 - first and second block sides that extend from the exterior block face to
 - 10 the interior block face;
 - a block top surface having a lock channel formed therein, the lock channel being defined by a channel front wall, a channel rear wall, and a channel bottom surface, the lock channel extending transversely across the block top surface from the first block side to the second block side, wherein the channel front wall
 - 15 forms a first shoulder that extends towards the interior block face so as to overhang a portion of the channel front wall, wherein the channel rear wall forms a second shoulder that extends towards the exterior block face so as to overhang a portion of the channel rear wall, and wherein the shoulders run generally parallel to each other along the lock channel; and
 - 20 a block bottom surface.

2. The system of claim 1, further comprising:

a soil reinforcement member laid across the block top surface with a portion of the soil reinforcement member laying in front of the lock channel, a portion of the soil reinforcement member laying behind the lock channel, and a portion of the soil reinforcement member inserted in the lock channel; and

a retainer bar having front, back, top, and bottom faces, the retainer bar having a front to back dimension that is greater than the closest distance between the first and second shoulders of the lock channel, the retainer bar having a top to bottom dimension that is less than the closest distance between the first and second shoulders of the lock channel;

the lock channel being of such size and shape as to permit the retainer bar to be inserted into the channel through the first and second shoulders, with a portion of the soil reinforcement member interposed between the retainer bar and the channel walls, and then to be rotated into a position below the first and second shoulders in which the retainer bar cannot be removed from the channel, whereby the soil reinforcement member is clamped between the retainer bar and the channel rear wall when a tensile force is exerted on the portion of the soil reinforcement member extending behind the lock channel.

3. The system of claim 2, wherein the back face of the retainer bar is oriented at an angle with respect to the top face of the retainer bar such that, when the retainer bar is rotated into position below the shoulders of the lock channel, the rear face of the retainer bar is substantially parallel to an adjacent portion of the rear channel wall.

4. The system of claim 2, wherein the soil reinforcement member is a synthetic geogrid material.

5 5. The system of claim 1, wherein the wall block further comprises an interior opening that extends from the first block side to the second block side, whereby, when a plurality of similarly configured blocks are laid side-by-side in a course, the interior openings align to form an internal channel running along the course.

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6. The system of claim 1, wherein the wall block further comprises a lock flange on the bottom surface of the block, the lock flange being defined by a flange front surface extending from the block bottom surface, a flange rear surface extending from the block bottom surface, and a flange bottom surface extending between the
15 flange front and rear surfaces, the lock flange extending transversely across the block bottom surface in substantially the same direction as the lock channel, the lock flange being sized, shaped, and positioned so that the flange will fit into the lock channel of a similarly configured wall block in the adjacent lower course when a wall is constructed, wherein the flange front surface includes a portion that extends towards
20 the exterior block face so as to overhang a portion of the flange front surface and is sized and shaped so as to engage the first shoulder of the lock channel of the similarly configured block either directly or indirectly if a portion of the soil reinforcement member is interposed between the flange front surface and the first shoulder, such that when the wall block is stacked atop the similarly configured block, the wall block is

properly aligned thereon and the engagement between the lock flange and the lock channel of the similarly configured block resists forward leaning or toppling of the wall block.

5 7. The system of claim 6, wherein the channel front wall comprises a first substantially planar surface that extends approximately perpendicularly downwardly from the block top surface, and a second substantially planar surface that extends obliquely forwardly from the first substantially planar surface.

10 8. The system of claim 1, wherein the channel bottom surface is arcuate.

 9. The system of claim 1, wherein the second shoulder is rounded so as to form a substantially arcuate rear edge of the lock channel.

15 10. The system of claim 1, wherein the exterior block face slopes inwardly from the bottom surface to the top surface of the wall block.

 11. The system of claim 1, wherein the wall block is formed of concrete.